Streamlining the Permit Process while Protecting Public Waters

Proposed Rule on Bridges and Culverts – NR 320

Summary of Rule Proposal

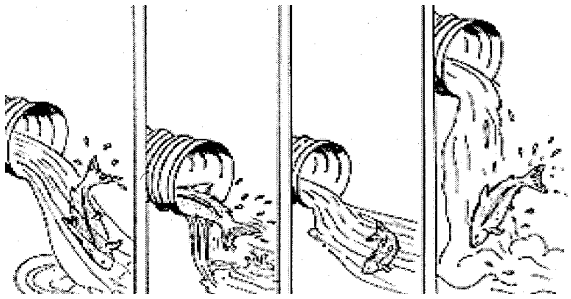
This rule modifies an existing rule to reflect the exemption, general permit and individual permit options provided by statute. This rule revision establishes construction, design, placement and location standards for projects to be eligible for statutory exemptions, establishes a general permit for clear span bridges, and establish standards for projects that may be authorized under an individual permit.

Replacement or maintenance of an existing culvert that is 24" or less in diameter or a previously permitted culvert is exempt except in areas of special natural resource interest or public rights features where a general or individual permit is required.

Why is this an issue for public waters?

Construction of waterway crossings can have both direct and indirect impacts on fisheries. Direct impacts include modification/destruction of habitat due to filling, channel changes and dredging. Indirect impacts result from vegetation removal, grading, and land clearing that results in erosion and sedimentation in the waterway. Potential environmental effects caused by improper culvert placement include:

- Degrading of a streambed and associated habitat – If a culvert or a pond caused by an undersized culvert replaces a section of the stream, the streambed and its associated aquatic and riparian habitats will be lost.
- Erosion of channel – If a culvert is installed too high so the downstream end lies above the streambed (perched culvert), a waterfall will result. This can lead to bed scouring, bank erosion, and undercutting and structural damage of the culvert. If the culvert slope is too great, the increased water velocity can cause erosion downstream.
- Restriction of fish movement – Fish have always had to overcome natural barriers, such as waterfalls and log jams when migrating. However, the expansion of forestry and urbanization has greatly increased the number of barriers they face. Improper installation of culverts can restrict fish passage in a variety of ways:
    - culvert inlets constrict stream flow, which increases the flow velocity at the inlet. The increased velocity makes it difficult for fish to swim upstream out of the culvert
    - culverts may be too small or too long for fish to swim through.
    - fish cannot swim long distances without resting. A lack of pools and rest areas immediately upstream and downstream of the culvert may make the culvert impassable if the distance they have to swim without resting is too far.



Previous Regulation

Past regulations allowed the DNR to control the degree of obstruction to navigation, to minimize the obstruction to flood flows, to minimize erosion, sedimentation and washout potential, and to protect the public interest (i.e., must consider natural scenic beauty and potential for blockage of fish migration) Individual permits were required for all culvert construction, maintenance, and replacement activities. All applications were public noticed and evaluated for design and installation considerations.

What's Being Proposed?

Exemptions on all 24" culverts and replacement of previously-permitted culverts as long as they are not in areas of special natural resource interest or public rights features. Under the revised emergency rule proposal, culverts are not exempt in perennial tributaries to trout streams. Key standards for exempt 24" culvert replacements include:

- One culvert per stream crossing
- Type and length of culvert remains the same
- Stream base flow of no more than 4 cfs (capacity of a 24" culvert)
- Must be installed so that 25% is below the streambed (allows fish and wildlife passage)
- Maximum 3% gradient (to avoid ponding and perching)
- Adequate fill material on top of culvert (avoid crushing that would block passage)
- No construction during fish spawning periods, March 15-June 1 unless given a waiver by local fisheries biologist
- Erosion control Best Management Practices used during construction

A general permit is also made available for all other previously-permitted culverts as long as the original permit conditions are followed.

What do YOU think?

DNR seeks your input on the proposed rules. You can participate in one of several ways:

- Fill out a questionnaire at a public hearing **open house**
- Send comments over the **internet** at http://adminrules.wisconsin.gov
- **Testify** at a public hearing. See locations, dates and times by going to DNR's website dnr.wi.gov, clicking on "Permits & Licenses", then "Waterway & Wetlands"
- **Mail** written comments to Ms. Roberta Lund, DNR-FH/3, P.O. Box 7921, Madison, WI, 53707-7921

Comments accepted through September 7, 2004